

CLAIMS

1. (Currently amended) A secure wireless local area network (LAN), comprising:
a firewall to control access to a wired computer LAN;
a wireless device coupled to a wireless device operator;
an access point coupled to the wired computer LAN in communication with the wireless device through an air channel to authenticate the wireless device without going through the firewall; and
an authentication server coupled to the wired computer LAN to provide the operator with access to the wired LAN after authenticating the access point, the wireless device, and the operator without going through the firewall.
2. (Previously presented) The secure wireless LAN of claim 1 where the access point includes a first authentication device to send a first authentication message to the wireless device, the second authentication message including validating information about the access point.
3. (Previously presented) The secure wireless LAN of claim 2 where the wireless device includes a second authentication device to send a second authentication message to the access point, the first authentication message including validating information about the wireless device and the operator.
4. (Previously presented) The secure wireless LAN of claim 3 where the access point sends the first and second authentication messages to the authentication server after authenticating the wireless device.
5. (Previously presented) The secure wireless LAN of claim 3 where the first and second authentication devices are smart cards.
6. (Previously presented) The secure wireless LAN of claim 1 including a control channel between the access point and the authentication server to send an authentication message between the access point and the authentication server, the authentication message including validating information about the access point, wireless device, and operator.

7. (Original) The secure wireless LAN of claim 6 including a data channel on the wired LAN for sending data from the wireless device to any other device coupled to the wired LAN, the data channel being enabled after the authentication message is validated by the authentication server.

8. (Previously presented) The secure wireless LAN of claim 6 where the communications between the wireless device and the access point and over the control channel is encrypted.

9. (Currently amended) A secure wireless local area network (LAN), comprising:
a firewall means to control access to a wired computer LAN;
a wireless means for use by a wireless device operator;
an access means coupled to the wired computer LAN to authenticate the wireless means without going through the firewall means;

an authentication server means coupled to the wired computer LAN to enable the operator's access through the wireless access means to the wired computer LAN after authenticating the access means, the wireless device, and the operator without going through the firewall means.

10. (Previously presented) The secure wireless LAN of claim 9 where the access means includes a first authentication means to generate, encrypt, and transmit a first authentication message to the wireless means, the first authentication message including validating information about the access means.

11. (Previously presented) The secure wireless LAN of claim 10 where the wireless device includes a second authentication means to generate, encrypt, and transmit a second authentication message to the access means, the second authentication message including validating information about the wireless device and the operator.

12. (Previously presented) The secure wireless LAN of claim 11 where the first authentication means transmits the first and second authentication messages to the authentication means after authenticating the wireless device.

13. (Previously presented) The secure wireless LAN of claim 11 where the first and second authentication means are smart cards.
14. (Previously presented) The secure wireless LAN of claim 9 including a control channel between the access means and the authentication means to send an authentication message between the access means and the authentication means, the authentication message including validating information about the access means, the wireless device, and the operator.
15. (Previously presented) The secure wireless LAN of claim 13 where communications between the wireless device and the access means and over the control channel are encrypted.
16. (Currently amended) A method for operating a local area network (LAN), comprising:
- generating a first authentication message including validating information about an access point connected to a wired LAN;
 - transmitting the first authentication message from the access point to a wireless device over a wireless channel;
 - validating the access point by analyzing the first authentication message without going through a firewall means;
 - generating a second authentication message including validating information about the wireless device and a wireless device operator;
 - transmitting the second authentication message from the wireless device to the access point;
 - validating the wireless device by analyzing the second authentication without going through the firewall means;
 - transmitting the first and second authentication messages to an authentication server after validating the access point and the wireless device without going through the firewall means;
 - validating the operator, the wireless device, and the access point without going through the firewall means; and
 - enabling a data channel between the wireless device and other devices on the wired LAN after validating the operator, the wireless device, and the access point and the operator;

where validating the access point, the wireless device, and the operator occurs at an authentication means ~~without going through a firewall means~~.

17. (Previously presented) The method of claim 16 where transmitting the first authentication message includes transmitting information about the access point contained in a first authentication device.

18. (Previously presented) The method of claim 17 where transmitting the second authentication message includes transmitting information about the wireless device and the operator contained in a second authentication device.

19. (Previously presented) The method of claim 16 where transmitting the first and second authentication messages includes establishing a control channel between the access point and the authentication server.

20. (Original) The method of claim 16 including encrypting information transferred over the wireless and control channel.